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Via FedEx

September 23, 1997

Mr. Edward J. Boyle
Remedial Project Manager
Department of the Navy
Northern Division
Naval Facilities Engineering Command
10 Industrial Highway
Mail Stop, #82
Lester, PA 19113-2090

RE: Delphi Interior & Lighting Systems/U.S. Navy

Dear Mr. Boyle:

Recently, the U. S. Navy and U.S.G.S. (on behalf of the Navy) have requested access to General Motors Corporation's (GM) Trenton facility for a two-fold purpose: (1) to take water level elevation readings in connection with the preparation of a regional water level map; and (2) to investigate certain impacts to Gold Run as part of a supplemental ecological study.

GM believes that additional data is needed to complete an area wide investigation of groundwater contamination and its potential ecological impact, and will provide the Navy with access to its Trenton property for that purpose if the Navy

agrees to address certain outstanding technical issues and correct certain technical deficiencies in its proposed scope of work.

With respect to the technical issues , GM has stated repeatedly that the Navy's groundwater investigation has failed to evaluate the off-site extent of its TCE contamination. As such, the Navy has not defined the horizontal extent of the TCE plume as is required by State and Federal regulations. GM has asked the Navy to correct that deficiency by installing additional off-site wells.

In defense of its preliminary decision not to install additional off-site wells, the Navy refers to a purported geologic confining unit on the Navy property which, in the opinion of the U.S.G.S., would preclude of TCE from migrating off the Navy site. The Navy was of the opinion that additional on-site data would have to be collected before a final decision could be made regarding the need to conduct additional off-site work.

While GM disagrees with that position, it is our understanding that the USGS is now evaluating the data produced by that effort. As such, we believe it appropriate to discuss the Navy's request for access in the context of the larger issue of the Navy's conduct of a thorough and complete off-site groundwater investigation. Indeed, the preparation of a regional groundwater map or model, cannot be completed properly without full delineation of the Navy's TCE plume. Further, it would be technically inappropriate for the Navy to use the model to theoretically delineate the extent of the plume when TCE contamination has been found hydraulically downgradient of its site.[1] Simply stated, the Navy's on-site investigation, no matter how thorough, is not a viable substitute for the placement of off-site wells where TCE contamination has been detected downgradient of the Navy's property line -- only a properly framed off-site investigation will serve that purpose.

As such, GM would be willing to consent to the U.S.G.S.'s request for access provided the Navy addresses, at a minimum, the following technical issues:

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[1] GM does not oppose the use of groundwater modeling for plume delineation in appropriate circumstances. Here, however, the documented presence of the TCE contamination downgradient of the Navy facility necessitates the development of additional off-site data.

- The use of remote sensing methods such as fracture-trace analysis and surface geophysics (e.g., GPR, VLF, seismic reflection) to select several locations for the installation of additional bedrock monitoring wells downgradient of Site 1 on the NAWC-Trenton facility.

- The use of borehole geophysical methods and/or similar methods to select the appropriate depth intervals to be monitored by the new downgradient bedrock wells. GM's records indicate the potential for a fracture-zone at elevations ranging from 70-to-90 ft. above mean sea level (AMSL) beneath the GM-Trenton facility; accordingly, GM recommends that the Navy investigate this stratigraphic interval as well as other important stratigraphic intervals and/or bedding units that may be identified as a result of the off-site groundwater investigation.

- GM specifically requests that the Navy install and sample an appropriate number of bedrock monitoring wells to investigate potential downgradient impacts associated with the documented TCE contamination problems associated with Site 1 at the Navy-Trenton facility.

- GM specifically requests that the Navy investigate vertical-defect structures that may breach the aquitard identified beneath Site 1 and enable the migration of TCE related contamination to deeper strata and downgradient locations.

- A groundwater/surface water interaction study performed on the GM property in 1991 indicated that Gold Run strongly influences local groundwater flow patterns. The fracture-trace study recently completed by Geovation for GM indicates that Gold Run follows a major fracture system whereas previous investigations suggested that Gold Run may follow a small fault. Accordingly, GM specifically requests that the Navy further investigate the geology of Gold Run and its influence on local groundwater flow and contaminant migration patterns.

Do we have a copy of this study?

- The Navy should collect and interpret the additional data outlined above prior to the further development of any large-scale groundwater model for the area encompassed by the Navy-Trenton and GM-Trenton facilities. Moreover, this data should be used to refine the structure, input parameters and groundwater database to be used in the Navy's groundwater model.

Now, allow us to turn to the Navy's request for access to GM's property for the purpose of conducting a supplemental ecological study. GM believes that the Navy should conduct a full investigation of the off-site ecological impacts associated with the documented environmental contamination at the Navy's Trenton facility. Based on our review of the workplan for the Supplemental Ecological Risk Assessment (SERA) as well as the documentation pertaining to the prior Ecological Risk Assessment (ERA), it is our opinion that the scope and approach of the SERA needs to be modified in several respects.

First, we do not believe it appropriate to eliminate volatile organic compounds (VOCs) such as TCE as "constituents of potential concern (COPC)".[2] The ERA clearly concluded that the Hilsenoff Biotic Index values calculated for Pond A, (located within the upper reaches of Gold Run closest to the Navy), "...indicate a system with severe organic pollution leading to poor water quality."[3] Furthermore, the ERA states in the final conclusion of the section entitled "Habitat Quality of Gold Run" that "[i]t should be noted that these [Hilsenof] indices indicate poor water quality as a result of organic pollution and are not reliable tools for determining inorganic pollution [emphasis added]".[4] Based on the ERA report, it is clear that the Navy has impacted upper reaches of Gold Run with "severe organic

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[2] "Workplan-Supplemental Ecological Assessment" dated June 19, 1997, prepared by EA Engineering, Science and Technology for the Navy; Pages 1-2, 2-2; Table 3-2.

[3] Ecological Assessment prepared by IT Corp. [Chapter 19 of the Navy's Final Draft Remedial Investigation Report], pages 18-19.

[4] Ecological Assessment prepared by IT Corp., Page 19-19.

pollution;" therefore, the Navy's contribution to this pollution should be fully addressed in the SERA.

Second, the ERA and proposed SERA have failed to address via standard methodology--i.e., aquatic toxicity testing on one or more reference organisms (e.g., a mycid shrimp and a fish) -- the Navy's impacts to Gold Run. Instead, the Navy has chosen to use the data from the sampling of selected environmental media (e.g., surface water and sediment) as the basis for theoretical calculations of the toxicity to certain organisms based on data models and/or guidance values published in the literature. Regulatory agencies such as the EPA and the NJDEP however, consider aquatic toxicity testing to be the standard approach for the evaluation of the ecological impacts of contaminant discharges from discrete point sources such as those associated with the surface-water drainage system at the Navy's facility (e.g., the West End drainage ditch and the storm-sewer catch basins which ultimately discharge to Gold Run). Accordingly, aquatic toxicity testing should be performed to assess the Navy's contribution to the previously documented impairment in the water and habitat quality of Gold Run.[5]

GM is interested in cooperating with the Navy for purposes of assessing the potential ecological risks associated with the environmental contamination documented at the Navy's Trenton facility. However, such cooperation is contingent upon the Navy's willingness to conduct a comprehensive ecological risk assessment that fully evaluates the Navy's contribution of organic and inorganic contaminants to Gold Run. To address these issues, GM recommends that the scope of the SERA should include, at a minimum, the following work items:

- Comprehensive aquatic-toxicity testing (i.e., bioassay testing) of the storm-sewer discharges from the Navy on at least one benthic organism (e.g., a shrimp) and at least one pelagic organism (e.g. a fish). GM recommends that samples of the storm-sewer effluent be obtained during both dry weather (low-flow) and storm conditions to evaluate the potential range in toxicity associated with changes in contaminant concentrations and/or discharges. This testing

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[5] Ecological Assessment prepared by IT Corp., [Chapter 19 of the NAWC's Final Draft Remedial Investigation Report].

would provide information regarding current impact. More extensive studies may have to be implemented to investigate historic impacts.

- Volatile organic compounds (VOCs) via Method 8260 or similar GS/MS methodology (including a library search) should be included as analytes for all samples of surface water and sediment described in the SERA.

- The following parameters should be added to the analyte list for surface water and sediment samples in order to more fully assess the impacts of organic pollution on Gold Run: halogenated methanes, total organic halides, total organic chlorides, total chlorides, and redox potential (in both surface water and sediment slurries). Care should be taken to avoid the aeration and agitation of samples for redox (ORP) measurements in order to fully assess the potential for anaerobic conditions. GM recommends that samples of stormwater be obtained during both dry weather (low-flow) and storm conditions to evaluate the potential range in toxicity associated with changes in contaminant concentrations and/or discharges.

- Microbiological assays of selected surface water and sediment samples for purposes of investigating the population density, character and health of the microbial community in Gold Run. Microbiological assays and/or analysis of parameters such as phospho-lipid fatty acids (PLFA) and plasmologens would be a highly specific means of assessing the overall state of the microbial community, (and therefore the overall health of organisms at the base of the food web), within the surface water and sediments of Gold Run. Such microbiological assays could provide insight into the mechanisms which underlie the observed poor quality of the water, benthic community and habitat within Gold Run. Care should be taken to minimize the aeration and agitation of samples in order to assess the role of anaerobic bacteria, which are expected to be extremely important within the environs of Gold

Run given the previously documented impairment in the water and habitat quality.

GM is interested in working with the Navy in developing a mutually acceptable scope and approach for the off-site investigation and ecological study. With respect to the off-site study, GM is simply asking the Navy to do what any responsible party in similar circumstances would be required by law to do -- fully delineate its plume. Moreover, given the Navy's proposal to have a ROD issued in September 1998, it is imperative that this issue be resolved now.

By copy of this letter, we are asking the NJDEP to review our suggestions and incorporate them into a required scope of work to be implemented by the Navy.

Please call me if you wish to discuss this matter further.

Very truly yours,

CARPENTER, BENNETT & MORRISSEY

Louis M. DeStefano

LMDeS/mbm